

Boise Basin Experimental Forest (Idaho)

Introduction

The Boise Basin Experimental Forest was established in 1933 to study ponderosa pine. It consists of 3,537 ha with elevations ranging from 1,200 to 3,630 m. Boise Basin is divided into three units surrounding Idaho City in southern Idaho. Idaho City was a booming mining town in the 1870s and the surrounding forests supplied material to the community. Two units were heavily affected by mining activities and the majority of trees in them now are the results of post-mining regeneration. The third unit, on steeper slopes, has many undisturbed areas (containing large areas of ponderosa pine), including a Research Natural Area.

Climate

The climate is characterized by warm, dry summers and cool, wet winters. Annual precipitation averages 635 mm with the most falling from October through June. Summers can be punctuated by downpours and severe lightning. Temperatures average -4 °C in the winter and 19 °C in the summer.

Soils

Soils are derived from granitic rocks of the Idaho Batholith. They are generally deep and mostly Typic or Lithic Xeropsamments, Cryumbrepts, Cryoboralls, Cryorthents, and Cryocrepts with pH ranges from 5.5 to 7.0. The 50-year ponderosa pine site index ranges from 53 to 66.

Vegetation

Interior ponderosa pine dominates the forest cover at Boise Basin. Prior to successful fire exclusion, frequent surface fires maintained the pine with patches of quaking aspen. Douglas-fir occupies many settings, with mountain shrubs occupying the cooler aspects and shallow soils.

Long-Term Data Bases

There are long-term data bases on historical fire return intervals, soils, habitat types, and vegetation trends.



Research, Past and Present

Beginning in 1933, studies at Boise Basin evaluated selection silvicultural systems and their effects on tree and ground-level vegetation growth and development. Subsequent studies evaluated factors affecting the germination, survival, and growth of young ponderosa pine. These studies were followed by research on seed storage, site preparation, porcupine feeding, thinning and pruning. Currently, old-growth restoration, prescribed fire, and root-system structures are being studied.

Major Research Accomplishments and Effects on Management

Research at Boise Basin has provided important information on ponderosa pine management, habitat types in dry forests, ponderosa pine regeneration, and response of ponderosa pine to prescribed fire.

Collaborators

USDA Forest Service's Region 4, Boise National Forest, National Interagency Fire Center, University Of Idaho, and Boise Cascade Corp. have collaborated with the Rocky Mountain Research Station's scientists.

Research Opportunities

There are research opportunities at Boise Basin on the following subjects: ponderosa pine restoration, the urban-rural interface, and recreation.

Facilities

There are no facilities at Boise Basin, which is located about 50 km northeast of Boise, on Highway 21.

Lat. 43°49' N, long. 115°50' W

Contact information

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<http://www.fs.fed.us/rm/main/expfor/boisebasin.html>